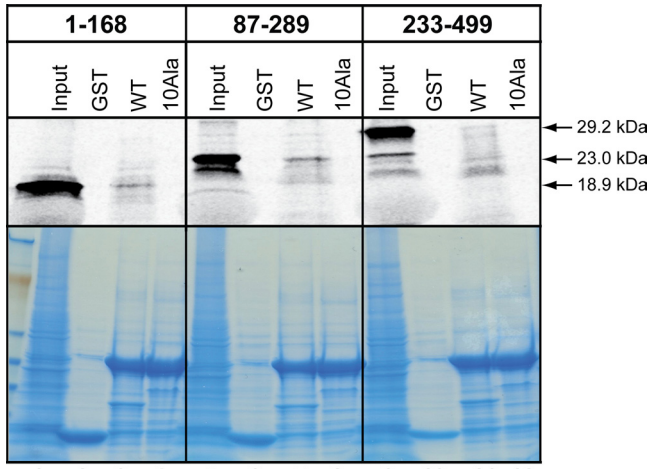
Papers of the Week

A Trio of Binding Partners for Gcn4♦

♦ See referenced article, *J. Biol. Chem.* 2010, **285,** 2438–2455

Activator Gcn4 Employs Multiple Segments of Med15/Gal11, Including the KIX Domain, to Recruit Mediator to Target Genes *in Vivo*

The Mediator complex, which contains over 20 different subunits, is an important coactivator of RNA polymerase II. The tail region of Mediator is not essential for basal activity, although it is the principal target of transcriptional activators like Gcn4. In this Paper of the Week, Iness Jedidi and colleagues sought to define the exact regions of the tail subunit protein Gal11 (Med15) required for the recruitment of Mediator to sites of transcription by Gcn4; currently, several Gal11 segments are known to bind Gcn4, but which one is most critical for Mediator recruitment and transcriptional activation is unknown. Using various yeast strains, Jedidi and colleagues found that the recruitment of Mediator to the *ARG1* promoter involves additive contributions from three different N-terminal segments of Gal11; these include the KIX domain (residues 10–86), a critical target of other activators, a region (116–277) containing a conserved B-box motif, and a third segment encompassing residues 319–354. These findings reveal a distinctive mode of binding for Gcn4, which, unlike other activators that target a single region of Gal11, employs multiple redundant interactions with Gal11 for efficient Mediator recruitment.



SDS-PAGE analysis of ^{35}S-labeled Gal11 fragments incubated with glutathione *S*-transferase (GST), GST-Gcn4p-WT, or GST-Gcn4-Ala$_{10}$ in *Escherichia coli* reveals that multiple segments of Gal11 can form complexes with Gcn4.

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